

REMARKS

Status of Claims

Claims 1, 3-4 and 6-7 are pending, of which claim 1 is independent. Claim 1 has been amended to correct informalities in claim language and to more clearly define the claimed subject matter. Support for the amendment is found, for example, at FIG. 2 of the present disclosure. Care has been taken to avoid introducing new matter.

Substance of Interview

Applicants thank the Examiner for his time and courtesy during the interview conducted with the Applicants' representative, Takashi Saito, on June 29, 2009. During the interview, Applicants' representative argued that Takemoto and Lashmore fail to disclose the claimed iron particles consisting of elemental iron and iron oxide. In reply, the Examiner admitted that Takemoto fails to disclose the iron particles consisting of elemental iron and iron oxide. However, the Examiner cited paragraph [0018] of Takemoto and page 9, lines 11-16 of the present specification, and asserted that oxygen is inevitably or inherently included in the iron particles of Lashmore. Further, the Examiner asserted that as Takemoto discloses, it is preferable to reduce the amount of oxygen in the iron particle. Applicants respectfully traverse the Examiner's assertion as follows.

Claim Rejection - 35 U.S.C. § 103

Claims 1, 3-4 and 6-7 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Takemoto et al. (JP 2004-172469) in view of Hatauchi et al. (JP 2001-189211) and Lashmore et al. (USP 6,251,514). Claims 1, 3-4 and 6-7 were rejected under 35 U.S.C. § 103(a) as being

unpatentable over Tsukada et al. (USP 5,800,636) in view of Takemoto, Hatauchi and Lashmore. Applicants respectfully traverse these rejections for at least the following reasons.

Applicants respectfully submit that none of the cited references, taken alone or in any combination thereof, discloses or suggests that iron particles consist of elemental iron and iron oxide, and an amount of oxygen contained in the iron particles is equal to or more than 0.016% by mass and less than 0.03% by mass, as recited by amended claim 1. The Examiner asserts that Takemoto discloses content of oxygen is 0.01 to 0.15 mass %. However, the alloy of Takemoto also contains Si and Al as additional elements (see, the table of Takemoto). Hatauchi also fails to disclose the use of iron particles consisting of elemental iron and iron oxide. Lashmore is silent about the amount of oxygen. Further, the oxygen amount of Tsukada is out of the claimed range.

Applicants also disagree with the Examiner's assertion that it is preferable to reduce the amount of oxygen in the iron particle. It should be noted that page 4, lines 2-5 of the present specification discloses that an appropriate range of oxygen amount is necessary to enhance the magnetic characteristics. As such, it is not necessary to reduce the oxygen amount to zero as Takemoto suggests. Moreover, col. 11, lines 42-43 of Tsukada discloses that “[a] lower oxygen content provides insufficient insulation among iron particles ...”

Furthermore, in Takemoto, alloyed metal is used for soft magnetic material. The alloyed metal like iron alloy includes other elements such as Al or Si or the like. Therefore, if oxygen exists when atomizing the alloyed metal particles, aluminum oxide or silicon oxide would be produced inside of the iron alloy. As a result, the required magnetic characteristics can not be obtained. Aluminum oxide or silicon oxide are chemically stable, and difficult to reduce once these compounds have been produced. Therefore, in Takemoto, it is necessary for the

atomization to depress oxygen as low as possible. Accordingly, in Takemoto, as paragraph [0021] discloses, a contact between alloyed metal and oxygen is shut off by making a surrounding environment of a solution of the alloyed metal to non-oxygenated atmosphere when atomizing the solution of the alloyed metal.

On the other hand, in Tsukada, where elemental iron (pure iron) is used, oxygen can be removed from the elemental iron by heat treatment (see col. 7, line 65 to col. 8, line 4 of Tsukada). Therefore, it is not necessary to set the elemental iron in non-oxygenated atmosphere. Accordingly, if the technique of Takemoto were applied to Tsukada, the amount of oxygen would be decreased too much, and insulation would become worse. As such, it would not have been obvious to combine Takemoto with Tsukada as the Examiner suggested because there is no motivation or suggestion to do so and the combination would impair the purpose of Tsukada. As such, the claimed amount of equal to or more than 0.016% by mass and less than 0.03% by mass would not have been obvious from any combination of Tsukada with any other of the cited references.

Based on the foregoing, Applicant respectfully submit that claim 1 and all claims dependent thereon are patentable over the cited references. Thus, it is requested that the Examiner withdraw the rejections of claims 1, 3-4 and 6-7 under 35 U.S.C. § 103(a).

Conclusion

Having fully responded to all matters raised in the Office Action, Applicant submits that all claims are in condition for allowance, an indication for which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicant's attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

McDERMOTT WILL & EMERY LLP



Takashi Saito
Limited Recognition No. L0123

**Please recognize our Customer No. 20277
as our correspondence address.**

600 13th Street, N.W.
Washington, DC 20005-3096
Phone: 202.756.8000 BKS:TS:MaM
Facsimile: 202.756.8087
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